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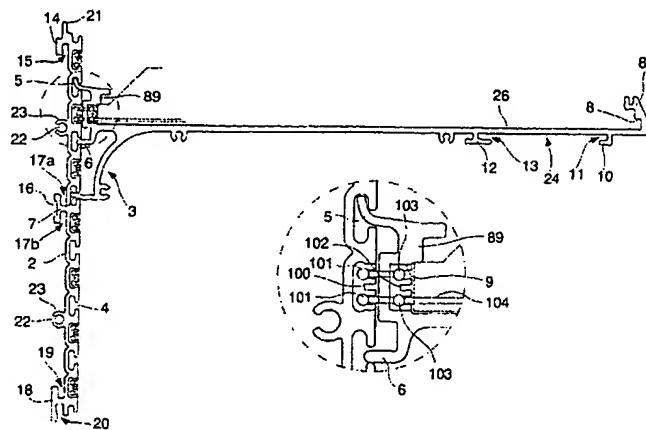
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(54) Title: SHELF ARRANGEMENT



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(57) Abstract: The invention relates to a shelf arrangement. The arrangement comprises at least one wall element (2, 80) with several essentially horizontal mounting slots (4, 81) at a vertical distance from one another, and at least one shelf support (3) with at least one locking part (5, 6, 7) to be placed in the said mounting slots (4) for locking the shelf support to the wall element (2). On the top surface (25) of the shelf (26), in its front and rear edge areas, are formed locking protrusions extending in the lateral direction of the shelf, the said protrusions comprising locking grooves (8, 9) opening towards one another for fixing additional parts extending in the depth of the shelf to them. The invention also relates to a shelf arrangement comprising said wall element (2) and a shelf support (3) comprising said locking part (5-7) and, on its lower surface, fastening means (10, 12) for different product display parts. Furthermore, the invention relates to a shelf arrangement comprising said wall element (2) and a shelf support (3) comprising said locking part (5-7), said shelf arrangement having integrated in it a low voltage current delivery system.

## Shelf arrangement

The present invention relates to a shelf arrangement, especially a shelf arrangement intended for displaying different commercial products, such as

- 5 shelving for cosmetics and other lightweight products. Depending on the choice of material, the shelf arrangement can also be made sufficiently solid for use with heavier goods, if necessary.

The aim of the present invention is to provide a shelf arrangement which is

- 10 simple to assemble and to which various additional parts can easily be added, such parts including, for example, dividing pieces located on the top surface of a shelf for dividing the products on the shelf into adjacent rows of products, pushing means for pushing the products in the rows towards the front edge of a shelf, and, for example, in the case of cosmetics shelves, 15 various sample cases and bases, which are preferably located underneath and/or at the front of the shelf. A further aim is to provide a shelf arrangement which can easily be provided with a low voltage system, for example, for lighting or other devices using low voltage current.

- 20 To achieve these aims, a shelf arrangement according to a first aspect of the invention is characterised in that it comprises at least one wall element with several essentially horizontal mounting slots at a vertical distance from one another, at least one shelf support with at least one locking part to be placed in the said mounting slots for locking the shelf support to the wall element, 25 and that on the top surface of the shelf, on its front and rear edges, are made locking grooves for fixing additional parts extending in the depth of the shelf to them.

- A shelf arrangement according to a second aspect of the invention is, on the 30 other hand, characterised in that it comprises at least one wall element having several essentially horizontal mounting slots at a vertical distance from one another, at least one shelf support having at least one locking part

to be placed in the said mounting slots for locking the shelf support to the wall element, and that on the bottom surface of the shelf are formed fastening means for product display parts to be connected to the shelf, the said parts comprising attachment means which attach in a locking manner to 5 the fastening means.

- A shelf arrangement according to a third aspect of the invention is characterised in that it comprises at least one wall element with several essentially horizontal mounting slots at a vertical distance from one another,
- 10 10 at least one shelf support with at least one locking part to be placed in the said mounting slots for locking the shelf support to the wall element, and that in the shelf arrangement is integrated a low voltage system for providing an electric current to desired points on the shelves.
- 15 15 Preferred embodiments of the invention are described in the dependent claims.

- The invention is described in greater detail in the following, with reference to the appended drawings, in which
- 20 20 Figure 1A shows a diagrammatic, cross-sectional view of one manner of joining a shelf and wall element comprised in the shelf arrangement according to the invention,
- 25 25 Figure 1B shows another embodiment of the manner of joining shown in Figure 1A,
- Figure 2 shows a side view of an embodiment of a shelf board used in the shelf arrangement according to the invention with an additional 30 30 part mounted thereon,

- Figure 3 shows a diagrammatic, vertical, sectional view of an alternative embodiment of the wall element used in the shelf arrangement according to the invention,
- 5 Figures 4 to 6 show different additional parts connected to a shelf of the shelf arrangement according to the invention, which are intended for product display,
- 10 Figure 7 shows a joint between two wall elements mounted on top of one another,
- Figure 8 shows an additional part to be placed on the top surface of a shelf,
- 15 Figure 9 shows another additional part to be placed on the top surface of a shelf,
- Figure 10 shows a diagrammatic perspective view of a method of implementing the shelf arrangement according to the invention, illustrating certain additional parts,
- 20 Figure 11 shows a diagrammatic perspective view of another method of implementing the shelf arrangement according to the invention, illustrating certain additional parts,
- 25 Figure 12 shows a diagrammatic view of the use of the wall element as an impact guard and/or marking system,
- Figure 13 shows a diagrammatic side view of an additional embodiment of a shelf, where the shelf is provided with parts using low voltage electric current, and

Figure 14 shows a diagrammatic perspective view of an additional embodiment of a wall element.

- According to Figures 1A and 1B, the shelf arrangement according to the
- 5 invention comprises at least one wall element 2 with several essentially horizontal mounting slots 4 at a vertical distance from one another. In the embodiment shown, the shelf 26 to be connected to the wall element 2 is provided with a support part 3 integral with it, the part having locking parts 5, 6 and 7, which are placed in the said mounting slots 4 of the wall element
- 10 2. The support part 3 can conceivably also be implemented as a separate part to which the shelf is then connected. In the embodiment shown in Figures 1A and 1B, the locking parts are placed in every other mounting slot 4. The locking parts 5 to 7 extend essentially across the whole width of the shelf 26. There may also be one or two or more than three locking parts
- 15 depending, for example, on the desired amounts of loading on the shelves.

According to Figures 1A, 1B and 2, on the top surface 25 of the shelf 26, in its front and rear edge areas, are formed locking protrusions 88, 89 comprising locking grooves 8, 9 opening towards one another for fastening

20 different additional parts extending in the depth of the shelf to them. Figures 2 and 8 show a dividing piece 40 which separates products or lines of products placed adjacent to each other on the shelf from one another. The dividing piece 40 comprises an essentially vertical dividing part 42 and an essentially horizontal fastening part 41, the front end 44a and rear end 44b of which fastening part 41 are placed in the said locking grooves 8 and 9, and thus lock the dividing piece in place. According to Figure 2, on the shelf, in front of both locking grooves 8, 9, are guiding protrusions 47 extending in the lateral direction of the shelf, and on the bottom of the dividing piece 40 mounted as an additional part are correspondingly formed attaching

25 protrusions 45 having downwards opening guiding grooves 46, whereby when the additional part 40 is mounted in the locking grooves, the guiding grooves 46 are placed on the guiding protrusions 47, thus causing the

additional part to be positioned essentially straight on the shelf. The guiding protrusions and attaching protrusions are preferably dimensioned so that the end of the additional part in the locking groove 8, 9 tensions in a spring-like manner into place.

5

Figures 1A and 1B further show current delivery means, which are located in every other slot 4. In Figure 1A, the said current delivery means include an insulator 100 located in the slot 4, inside which insulator are placed two conductors 101 isolated from each other, one of which acts as a phase conductor and the other as an earth conductor. In Figure 1B, inside the insulator 100 is located only one conductor 101, which acts as a phase conductor while the shelf acts as an earth conductor. In Figures 1A and 1B, in the wall element side locking groove 9 of the shelf 26, are shown corresponding electrical connection parts, in which reference numeral 102 illustrates an insulator and reference numeral 103 an electrical connector, from which current can be conducted to an electrical device, such as, for example, the devices described in connection with Figure 13, located at the front part of the shelf or elsewhere, for example, by means of the conductor marked by reference numeral 104 in Figure 1A. The electrical connector 103 may be, for example, a connecting pin led through a hole drilled through the support part 3, which pin is set against the conductor 101.

In Figure 1A, on the upper edge of the wall element 2 is formed the tongue part 21 of a tongue and groove joint, and on the lower edge of the wall element the groove part 20 of a tongue and groove joint. By placing wall elements 2 on top of each other by means of the said tongue and groove joint, the seam will remain hidden and, as seen from the front, the wall element will appear to be a solid construction, as can be seen in the diagrammatic perspective view of Figure 10, where the topmost locking part 30 of the support part of the lower shelf 26 is in the fastening groove formed at the tongue and groove joint. The tongue 21 and the groove part 20 are preferably dimensioned in such a way that the wall elements 2 can, if so

desired, also be mounted in a mutually angular position, as shown diagrammatically in Figure 7.

On the reverse side of the wall element 2 shown in Figure 1A are formed  
5 fastening means 14, 16 and 18 having fastening grooves 15, 17a, 17b and  
19, which are intended for fastening on the walls of rooms or on separate  
locking parts (not shown) formed in the framework of the shelf. Reference  
numeral 23 denotes a reinforcing part in which is formed a groove 22 that  
can be used as an mounting hole for screws for joining different end pieces  
10 on the side ends of the wall element.

Figure 3 shows an alternative embodiment of a wall element used in the  
shelf arrangement according to the invention, where the mounting slots 4  
are formed on both main surfaces of the wall element. The wall element  
15 according to Figure 3 is preferably dimensioned in such a way that the  
distance between the mounting slots 4 on one side of the wall element is the  
same as the mutual distance between every other groove in the wall element  
shown in Figures 1A and 1B, that is, the distance between the two locking  
parts 5 and 6 of the shelf support 3 and correspondingly of 6 and 7, whereby  
20 the same shelves 26 with their support parts 3 can be used in both wall  
element embodiments. To the wall element according to Figure 3 can  
obviously also be added a low voltage system, if so desired.

On the lower surface 24 of the shelf 26 are made fastening means 10 and  
25 12, which comprise grooves 11, and correspondingly 13, opening towards  
one another. These fastening means are intended for different product  
display parts to be incorporated in the shelf, such as, for example, parts 30,  
35 and 37 shown in Figures 4 to 6. The product display means comprise  
attachment means 31, 32, which set in the grooves 11 and 13 locking the  
30 product display part in place on the front edge of the shelf. The product  
display parts 30, 35 and 37 are preferably designed in such a way that the  
attachment means 31, 32 can be placed in a snap joint manner in the

grooves 11, 13 by bending the attaching means 31, 32 towards each other and by releasing them from the pressure when they are at the said grooves, whereby they will move inside the grooves in a spring-like manner.

- 5 The product display part 30 shown in Figure 4 is intended, for example, for lipsticks 33 displayed as testers and in it are formed openings 34 through which the lipsticks are pushed inside the part 30. The product display parts 35 and 37 shown in Figures 5 and 6 are intended, for example, for samples of powder products. In Figure 5, the plane-like part 36 projecting from the  
10 front edge of the shelf 26 of the product display part 35 is in an angular position with respect to the plane determined by the shelf, whereas in Figure 6, the corresponding plane-like part 38 of the product display part 37 is essentially parallel with the shelf. The plane-like parts 36 and 38 are provided with openings 39.

15

- The product display parts may also be made in such a way that they comprise a separate frame part (not shown), which locks in the grooves 11, 13 by the attachment means, to which frame the actual product display part can be placed in such a way that it can be pulled out from a position below  
20 the shelf and pushed back to a position below the shelf. The frame part may include, for example, guide grooves extending in the longitudinal direction of the frame part and, correspondingly, slide laths or similar guide means in the product display part, which allow the product display part to be moved along the frame part. The frame part may be located below the shelf in such a way  
25 that the product display part will move back and forth essentially in the depth of the shelf or diagonally with respect to it.

- Figure 9 shows a pushing means 50 as an additional part to be placed on the top surface of the shelf, the pushing means comprising a fastening/guiding piece 51 extending from the front edge locking part 8 to the rear edge locking part 9, along which piece a sliding piece 53 loaded by a spring means 52 moves, the sliding piece exerting a force on the products on the shelf  
30

which moves them forward towards the front edge. The products placed on the shelf are normally positioned in a line and located on top of the fastening/guiding piece 51, whereby the pushing means 53 causes them to move towards the front edge as products are removed from the front edge.

5

- Figure 10 shows a diagrammatic perspective view of two wall elements 2 placed on top of each other, to which are connected shelves 26, on the front edge of the upper shelf being connected a product display part 35 complying with Figure 5 and on the front edge of the lower shelf 26 being connected a 10 product display part 37 complying with Figure 6. On the top surface of the upper shelf 26 is located a pushing means comprising a fastening/guiding part 51 and a sliding piece 53 sliding along it which is loaded by a spring 52 towards the front edge of the shelf.
- 15 Figure 11, on the other hand, shows a diagrammatic perspective view of the use of the wall element shown in Figure 3 provided on two sides with mounting slots. It illustrates the positioning of a shelf 26 on either side of the wall element, provided with an additional product display part 30. On the left-hand side of Figure 11 are in addition located three dividing pieces 40 on 20 the shelf, of which the outermost may also be used to prevent the products on the shelf from falling over the edge from the shelf.

- In addition to being used as a part of a shelf arrangement, the wall element 2 shown in Figures 1 and 3 may also be thought to be used for various 25 impact guarding purposes and/or marking systems by placing, for example, neoprene rubber or filler pieces 60, 61 of other suitable material in the slots 4, which will act as shock absorbers and/or code markings, for example, by using filler pieces of different colours (Figure 12). The filler pieces may be of different sizes and/or colours and may extend over the whole length of the 30 slot 4 of the element 2 or only over a part of its length. This type of impact guards and/or marking systems can be used, for example, in shops, hospitals, and other similar premises.

Figure 13 shows a diagrammatic side view of a shelf 26 provided with a low voltage system comprising a current delivery connector 105, via which the shelf is connected to the current delivery means in the wall element. The 5 application in the embodiment shown is an LED light fixture 72 and an LED fibre light fixture 71. Figure 13 further shows a detector, by reference numeral 70, which may be used for expressing different types of product information, such as the number of particular products on the shelf, a signal indicating that a product is running out, expressing the quality and/or date of 10 a product based, for example, on reading a bar code or on microprocessor technology, or other expression of the desired information. The detector may be provided with a wired or wireless data transfer system.

In Figure 14 is, on the other hand, shown an alternative embodiment of the 15 wall element, where the wall element 80 comprises a vertical support bent of metal sheet which includes side planes 82 and between them an outwards protruding centre part 83. In the centre part are formed mounting slots 81 which in this embodiment consist of through holes contrary to the previous embodiments of the wall element 2, where the mounting slot 4 has a solid 20 base. The wall elements 80 preferably extend over the total height of the shelving and there are normally several of them adjacent to each other at a horizontal distance from one another. The wall elements 80 may also be assembled into a pillar, for example, a square pillar in such a way that there is a wall element 80 on two opposite sides of the pillar or a said wall element 25 80 on all sides of the pillar.

## Claims

1. A shelf arrangement, **characterised** in that it comprises at least one wall element (2, 80) with several essentially horizontal mounting slots (4, 81) at a vertical distance from one another, at least one shelf support (3) with at least one locking part (5, 6, 7) to be placed in the said mounting slots (4) for locking the shelf support to the wall element (2), and that on the top surface (25) of the shelf (26), in its front and rear edge areas, are formed locking protrusions extending in the lateral direction of the shelf, the said protrusions comprising locking grooves (8, 9) opening towards one another for fixing additional parts extending in the depth of the shelf to them.
2. A shelf arrangement as claimed in claim 1, **characterised** in that the said at least one locking part (5, 6, 7) extends essentially across the total width of the shelf (26).
3. A shelf arrangement as claimed in claim 1 or 2, **characterised** in that the shelf support (3) forms an integral structure with the shelf (26) it supports.
4. A shelf arrangement as claimed in any of the claims 1 to 3, **characterised** in that on the shelf, in front of the locking grooves (8, 9), are guiding protrusions extending in the lateral direction of the shelf, and that on the bottom of the additional part are formed attaching protrusions having downwards opening guiding grooves, whereby when the additional part is mounted in the locking grooves, the guiding grooves are placed on the guiding protrusions, thus causing the additional part to be positioned essentially straight on the shelf.
5. A shelf arrangement as claimed in claim 4, **characterised** in that the guiding protrusions and attaching protrusions are dimensioned so that the end of the additional part in the locking groove (8, 9) tensions in a spring-like manner into place.

6. A shelf arrangement as claimed in any of the claims 1 to 5,  
**characterised** in that on the lower surface (24) of the shelf (26) are formed fastening means (10, 12) intended for product display parts (30, 35, 37) to  
5 be incorporated in the shelf (26), which comprise attachment means (31, 32) which attach in a locking manner to the fastening means (10, 12).
7. A shelf arrangement as claimed in claim 6, **characterised** in that as fastening means on the lower surface (24) of the shelf (26) are fastening  
10 protrusions (10, 12) provided with grooves (11, 13) which extend in the lateral direction of the shelf (26) at a horizontal distance from one another.
8. A shelf arrangement as claimed in any of the claims 1 to 7,  
**characterised** in that as an additional part is a pushing means (50)  
15 comprising a fastening/guiding piece (51) extending from the front edge locking groove (8) to the rear edge locking groove (9), along which moves a sliding piece (53) loaded by a spring means (52), the sliding piece exerting a force on the products on the shelf which moves them forward towards the front edge.  
20
9. A shelf arrangement as claimed in claim 8, **characterised** in that as an additional part is a dividing piece (40) which separates products or lines of products placed adjacent to each other on the shelf from one another, the dividing piece (40) comprising an essentially vertical dividing part (42) and  
25 an essentially horizontal fastening part (41), the front end (44a) and rear end (44b) of which fastening part (41) are placed in the said locking grooves (8 and 9).
10. A shelf arrangement as claimed in any of the above claims,  
30 **characterised** in that the wall element (2) is provided with mounting slots (4) on both its sides (Figure 3).

11. A shelf arrangement as claimed in any of the claims 1 to 10, **characterised** in that on one horizontal edge of the wall element (2) is formed the tongue part (21) of a tongue and groove joint and on its opposite horizontal edge is formed the groove part (20) of a tongue and groove joint  
5 for fastening wall elements to each other on top of each other.
12. A shelf arrangement as claimed in claim 11, **characterised** in that the tongue and groove joint (20, 21) of the wall element (2) is dimensioned in such a way that the wall elements placed on top of each other may be in an  
10 angular position with respect to each other (Figure 7).
13. A shelf arrangement as claimed in any of the above claims, **characterised** in that in the shelf arrangement is integrated a low voltage current delivery system for providing electric current to desired points on the  
15 shelves.
14. A shelf arrangement as claimed in claim 13, **characterised** in that the wall element (2) and/or shelf acts as an earth conductor, and that in at least one mounting slot (4) is located a phase conductor (73), which can be  
20 connected to a phase conductor provided on the shelf.
15. A shelf arrangement as claimed in claim 14, **characterised** in that on the lower surface of the shelf is painted a phase conductor or phase conductors with electrically conductive paint.  
25
16. A shelf arrangement as claimed in any of the above claims, **characterised** in that a shelf or an additional part located on it is provided with a detector which indicates information relating to the products.
- 30 17. A shelf arrangement as claimed in claim 16, **characterised** in that the information indicated includes the number of products, the quality of the products, or information on dating, or different combinations of these.

18. A shelf arrangement as claimed in claim 16, **characterised** in that the detector is wireless.
- 5    19. A shelf arrangement as claimed in claim 16, **characterised** in that the detector can be moved to different points with respect to the shelf.
20. A shelf arrangement, **characterised** in that it comprises at least one wall element (2, 80) with several essentially horizontal mounting slots (4, 81) at a vertical distance from one another, at least one shelf support (3) with at least one locking part (5, 6, 7) to be placed in the said mounting slots (4) for locking the shelf support to the wall element (2), and that on the lower surface (24) of the shelf (26) are formed fastening means (10, 12), intended for different product display parts (30, 35, 37) to be incorporated in 10 the shelf, which comprise attachment means (31, 32) which attach in a locking manner to the fastening means (10, 12).
- 15
21. A shelf arrangement, **characterised** in that it comprises at least one wall element (2, 80) with several essentially horizontal mounting slots (4, 81) at a vertical distance from one another, at least one shelf support (3) with at least one locking part (5, 6, 7) to be placed in the said mounting slots (4) for locking the shelf support to the wall element (2), and that in the shelf 20 arrangement is integrated a low voltage current delivery system for providing an electric current to desired points on the shelves.
- 25
22. A shelf arrangement as claimed in claim 21, **characterised** in that the current delivery system includes an insulator (100) located in a mounting slot (4) of the wall element, inside which insulator are one or two electrical conductors (101) and a connector means (103) is arranged in the shelf (26) 30 which is connected to the conductor (101) in the mounting slot (4) when a shelf is placed in the wall element, from which connector part current can be conducted to electrical devices on the shelf.

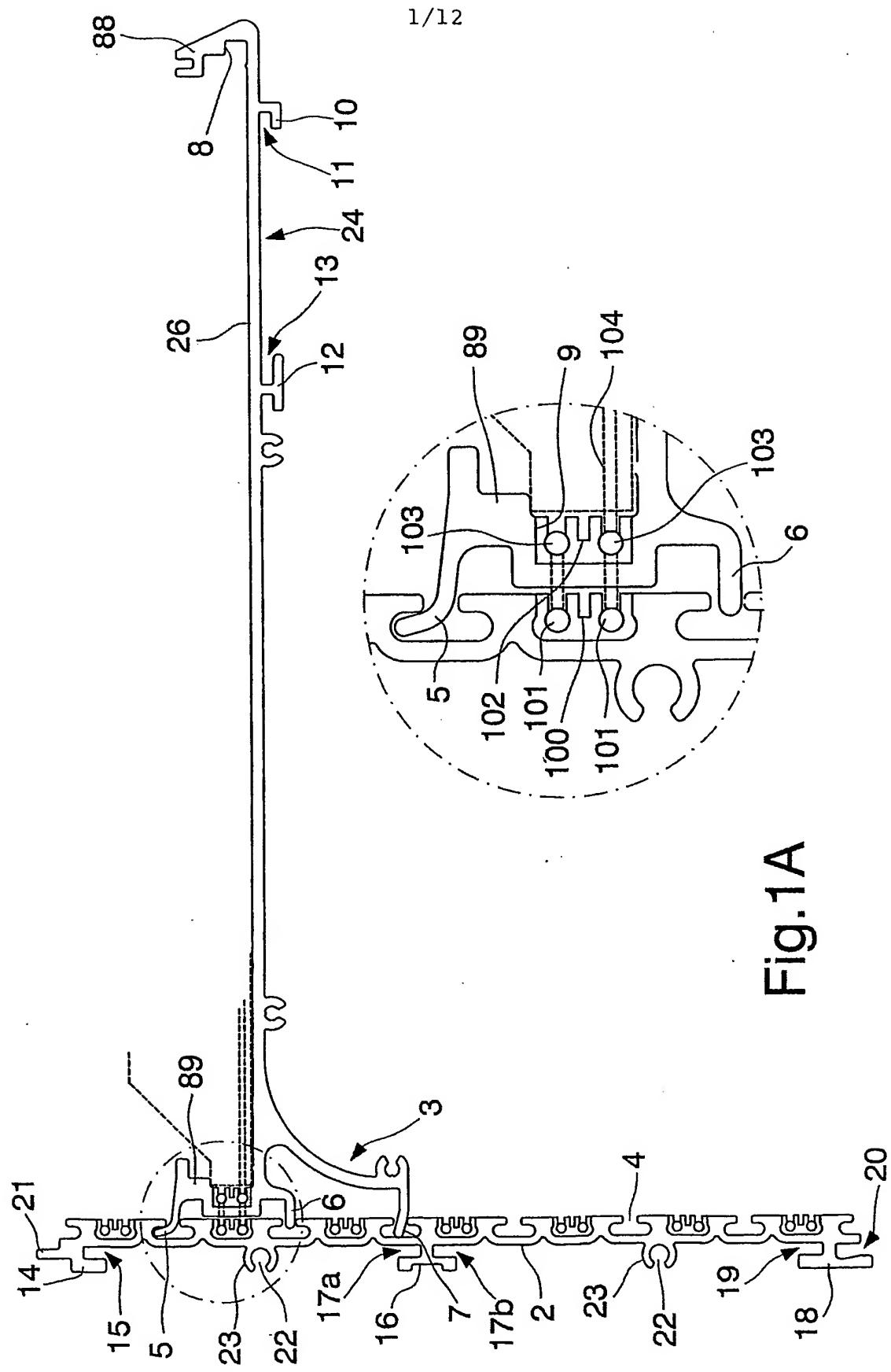


Fig. 1A

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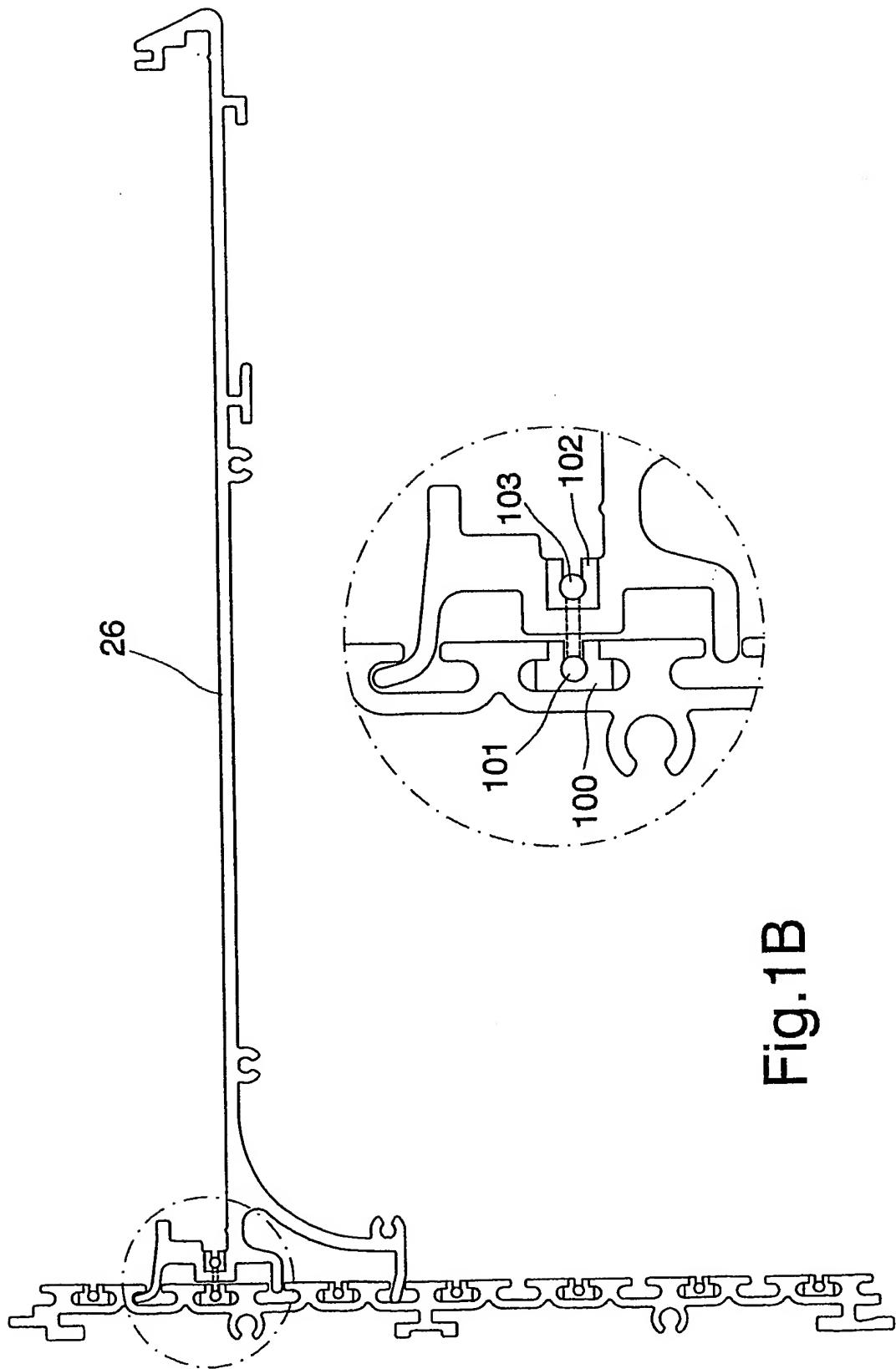


Fig. 1B

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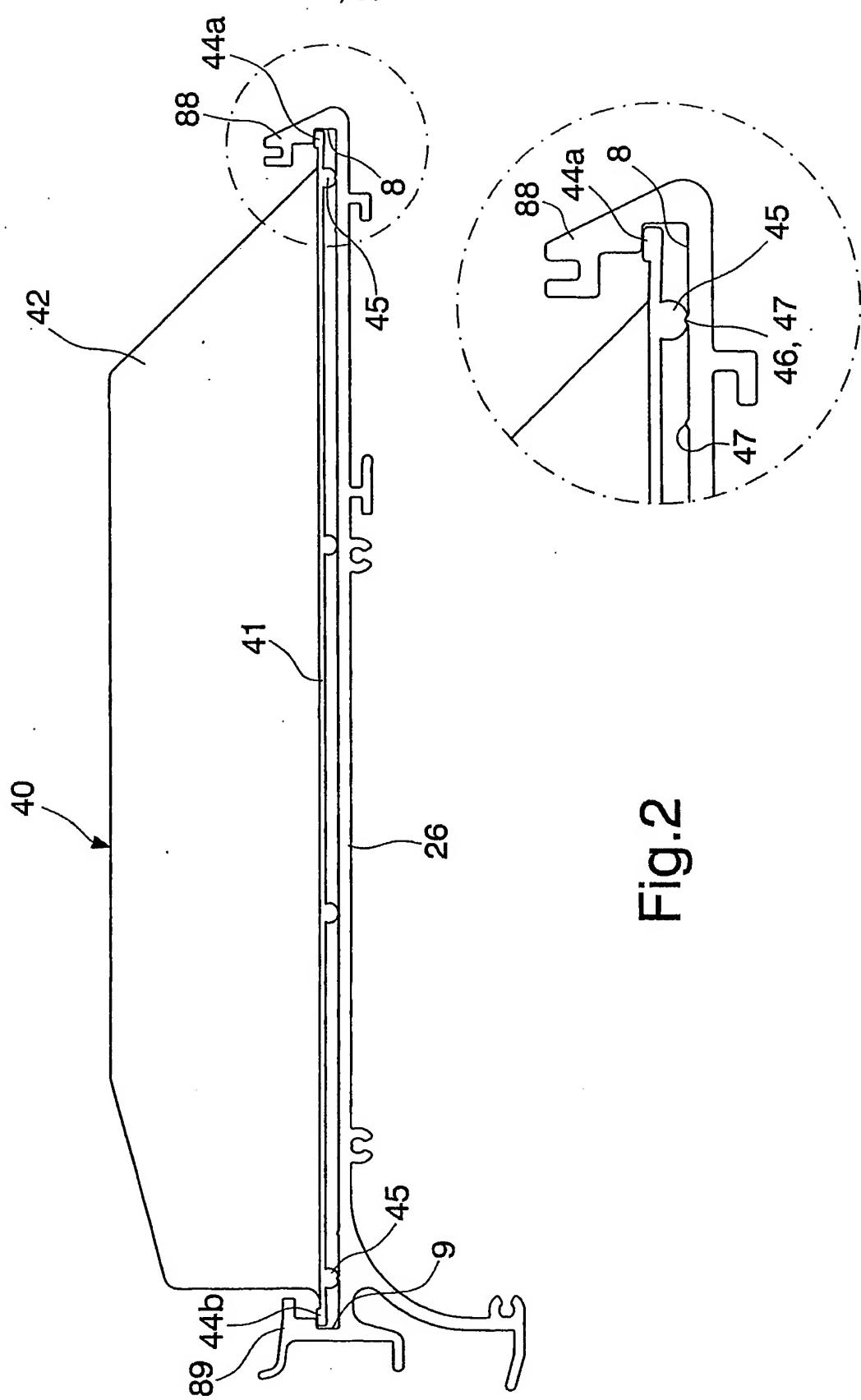
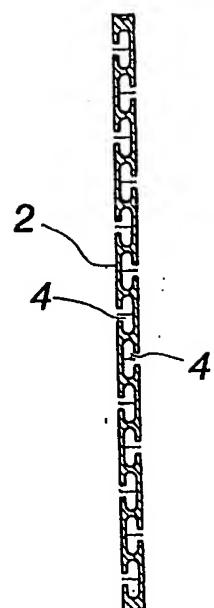


Fig.2

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*Fig.3*

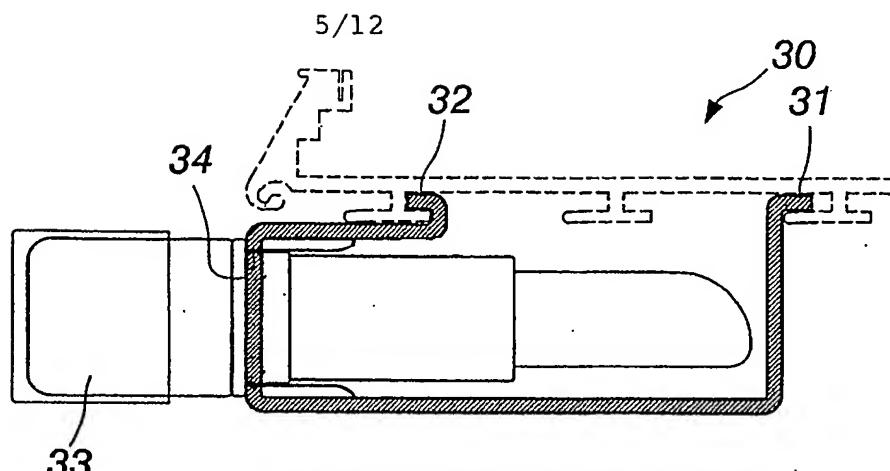


Fig.4

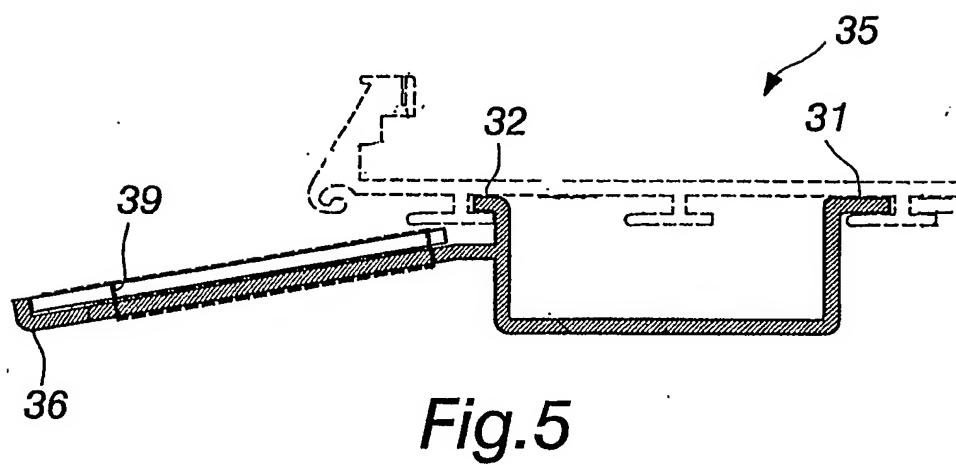


Fig.5

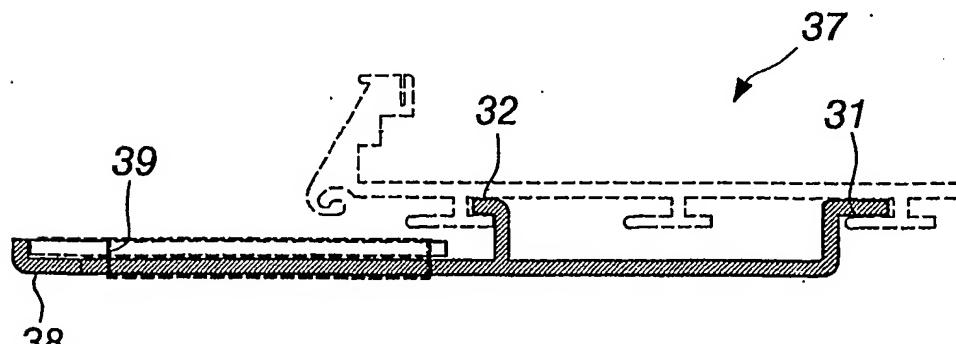
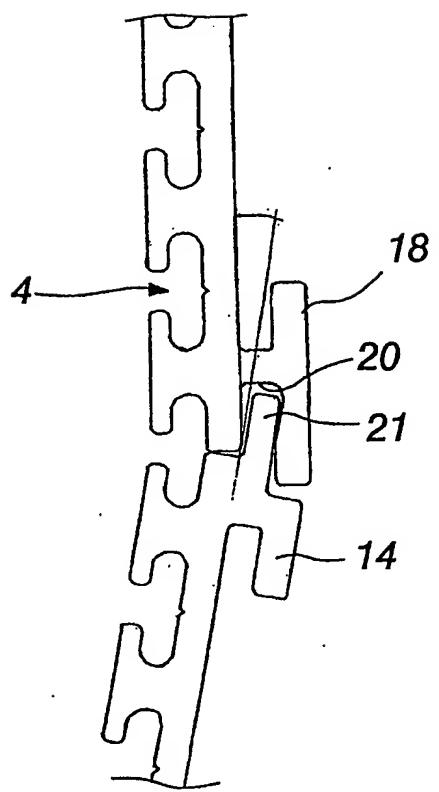
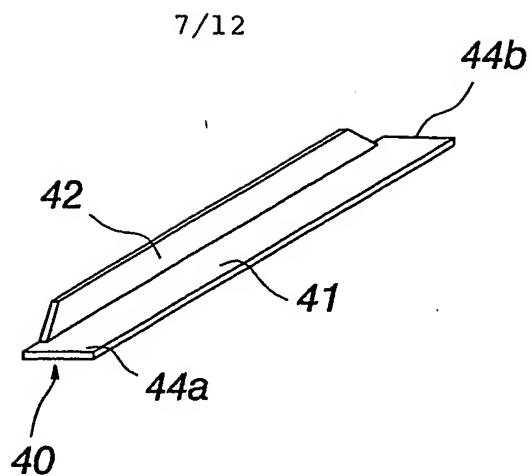


Fig.6

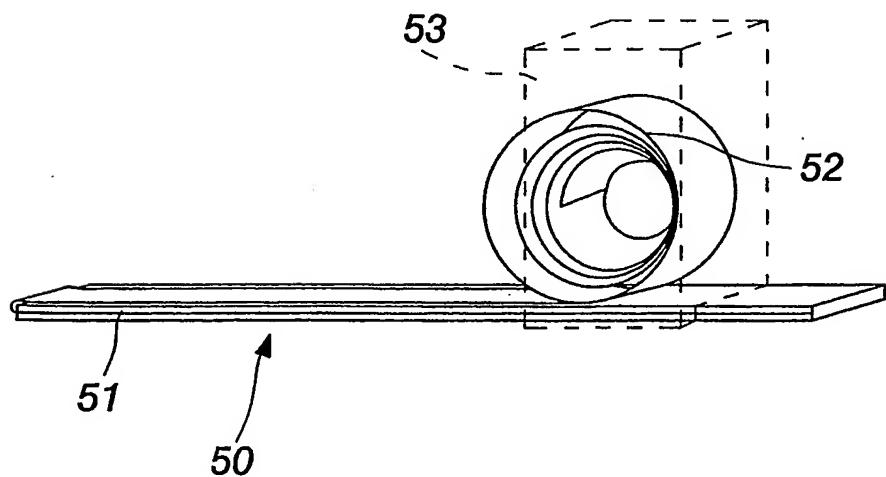
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*Fig.7*



*Fig. 8*



*Fig. 9*

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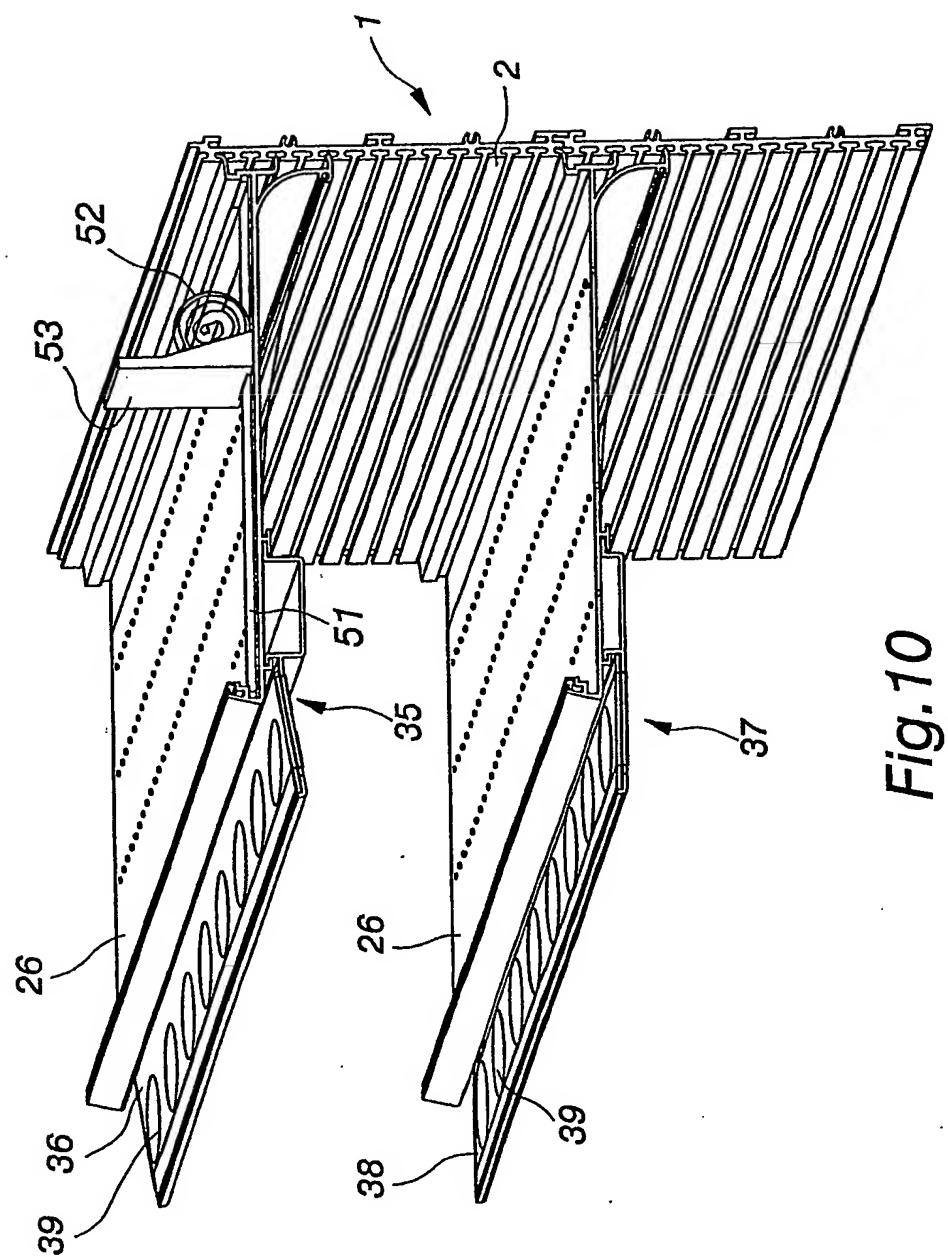


Fig. 10

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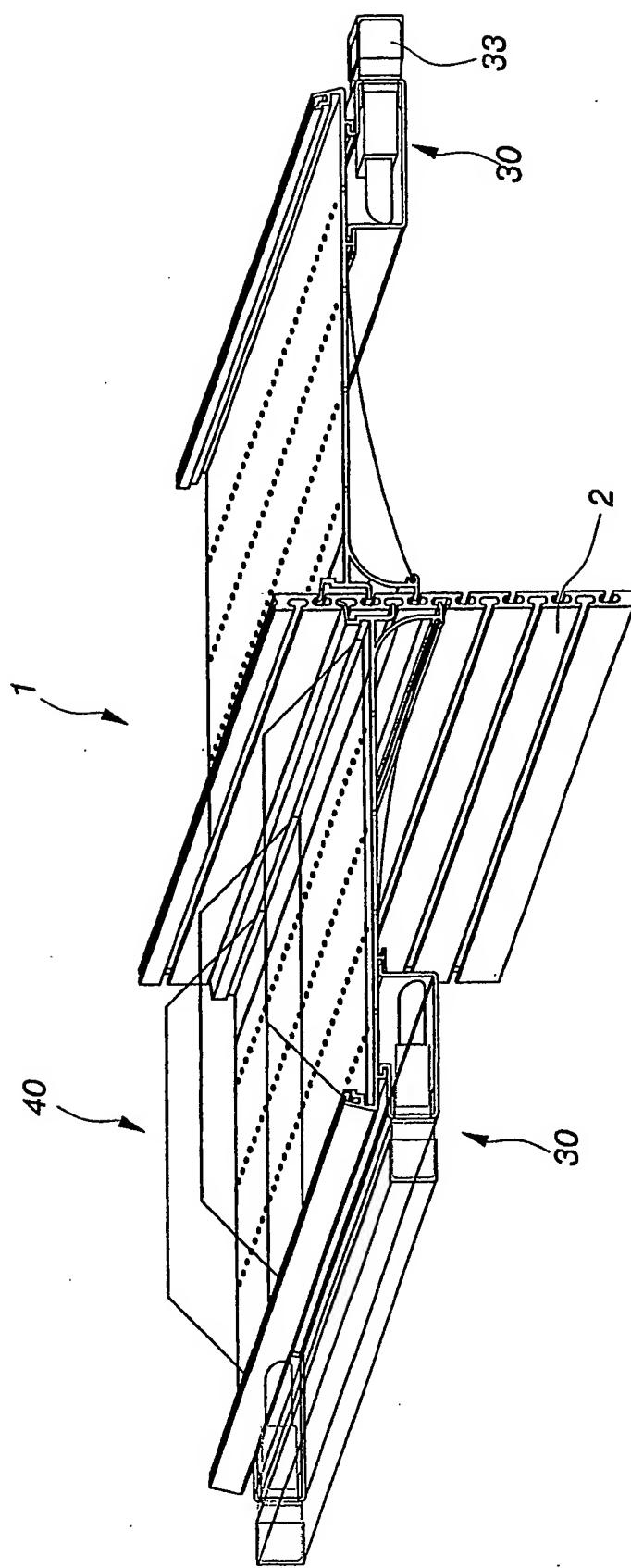


Fig. 11

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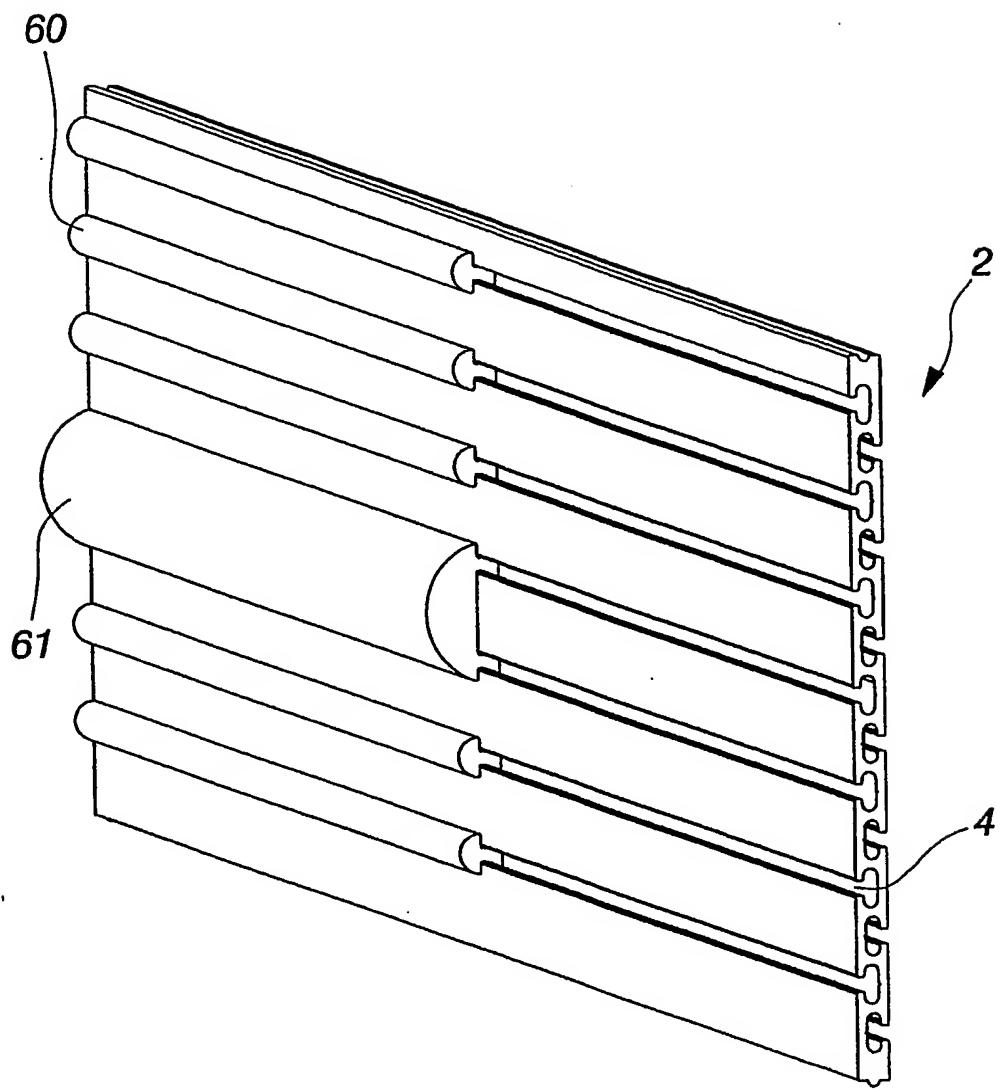
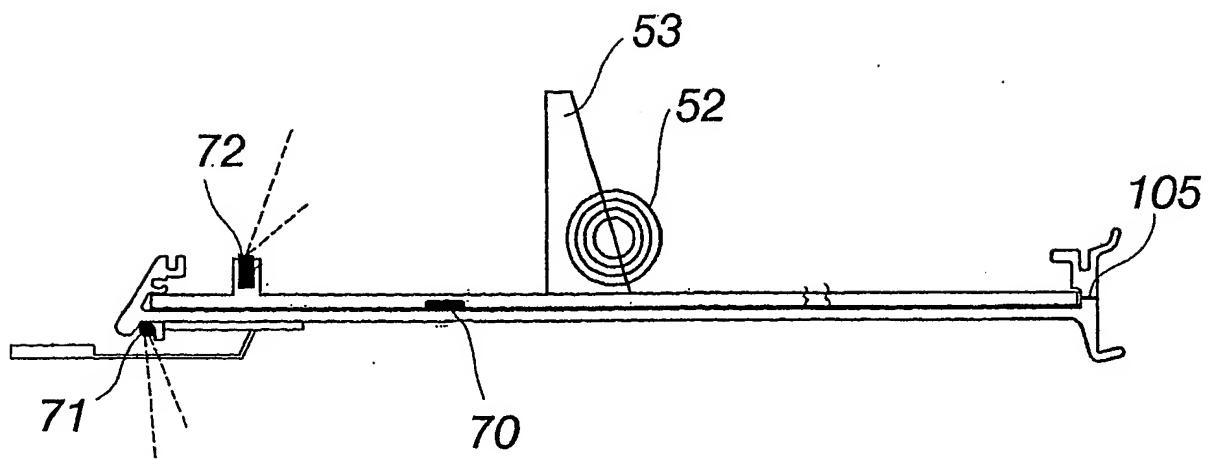


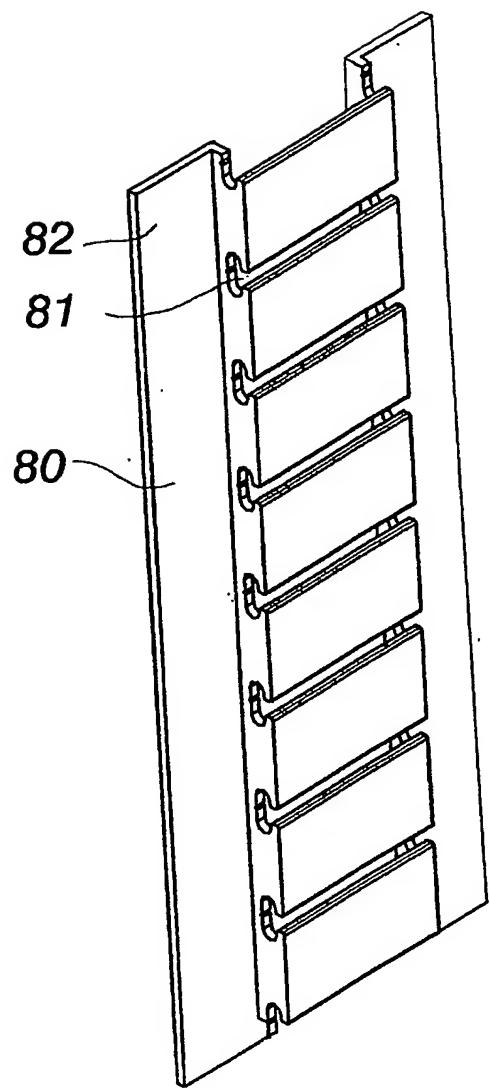
Fig.12

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*Fig.13*

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*Fig. 14*

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI 03/00133

## A. CLASSIFICATION OF SUBJECT MATTER

IPC7: A47B 57/58, A47F 5/08 // A47F 3/08

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: A47B, A47F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5228579 A (A. KAUFMAN), 20 July 1993 (20.07.93), figure 2 and text --	1,2,4,9,10
Y	US 5255803 A (J.D. PAVONE ET AL), 26 October 1993 (26.10.93), figure 8 and text --	1,3,4,9,10
Y	SE 514176 C2 (HL DISPLAY AB), 15 January 2001 (15.01.01), figure 9 and text --	1-4,9,10
A	WO 9115141 A1 (YABLANS, G.), 17 October 1991 (17.10.91), figure 4 and text -----	8

 Further documents are listed in the continuation of Box C. See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"B" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

04-06-2003

27 May 2003

Name and mailing address of the ISA/  
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**INTERNATIONAL SEARCH REPORT**International application No.  
**PCT/FI 03/00133****Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.: **17**  
because they relate to subject matter not required to be searched by this Authority, namely:  
**claim 17 comprises mere presentation of information (PCT Rule 39.1(v)).**
2.  Claims Nos.: **13, 21**  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:  
**claims 13 and 21 are not clear with respect to the new and useful design features of the claimed invention (PCT Rule 6).**  
.../...
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

1. **Claims 1-19: A shelf arrangement comprising wall element(s) with horizontal mounting slots at a vertical distance from one another for holding shelf support(s) to said wall element(s), the shelves of said shelf arrangement comprising protrusions formed with locking grooves for fixing additional parts to the shelves.**  
.../...

1.  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

- The additional search fees were accompanied by the applicant's protest.  
 No protest accompanied the payment of additional search fees.

**INTERNATIONAL SEARCH REPORT**International application No.  
**PCT/FI 03/00133****Box I**

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established will not be the subject of an international preliminary examination (Rule 66.1(e) PCT).

**Box II**

2. Claim 20: A shelf arrangement comprising wall element(s) with horizontal mounting slots at a vertical distance from one another for holding shelf support(s) to said wall element(s), the lower surface of the shelves of said shelf arrangement comprising fastening means for different product display parts.
3. Claims 21-22: A shelf arrangement comprising wall element(s) with horizontal mounting slots at a vertical distance from one another for holding shelf support(s) to said wall element(s), in which shelf arrangement is integrated a low voltage current delivery system.

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

29/04/03

International application No.

PCT/FI 03/00133

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
US 5228579 A	20/07/93	NONE		
US 5255803 A	26/10/93	NONE		
SE 514176 C2	15/01/01	AU 1266599 A EP 1083807 A SE 9802037 A WO 9963864 A	15/06/99 21/03/01 10/12/99 16/12/99	
WO 9115141 A1	17/10/91	DE 69024493 D EP 0478570 A,B	00/00/00 08/04/92	